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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/758,241	01/12/2001	Katsuhisa Tanaka	10517/76	7842

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WASHINGTON, DC 20005

EXAMINER

LORENZO, JERRY A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 09/11/2002

12

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/758,241	<b>Applicant(s)</b> TANAKA, KATSUHISA	
	<b>Examiner</b> Jerry A. Lorengo	<b>Art Unit</b> 1734	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 June 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some    c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

(1)

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

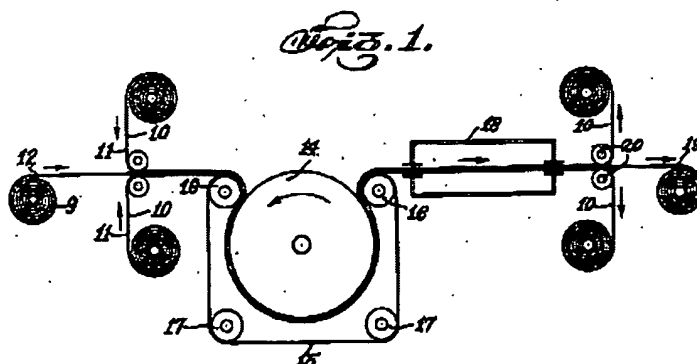
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2 and 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 2,485,725 to Francis, Jr. in view of U.S. Patent No. 4,724,026 to Nelson.

Regarding applicant claim 1, Francis, Jr. discloses an apparatus capable of manufacturing a substrate web 12 having a coating 11 deposited on at least one side comprising:

(1) A hot press 14,15 capable of forming a coated web (joined member) 11,12 by heating and pressing a transfer substrate (backing sheets) 10 having a transferable coating 11 thereon to at least one side of a substrate web 12 (Figure 1; column 5, lines 5-13); and

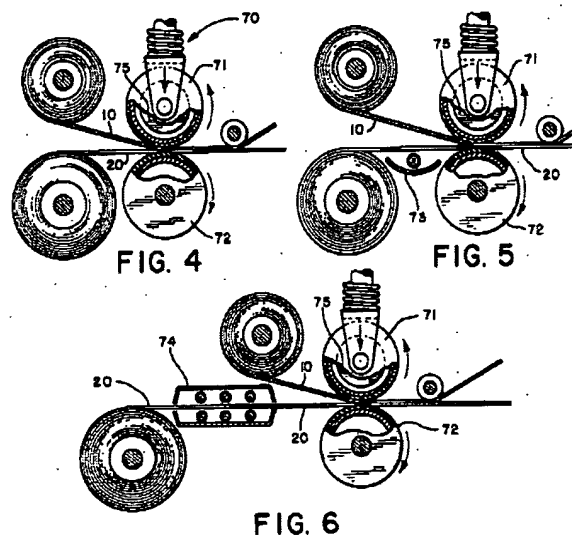
(3) A separating machine (stripping rolls) 20 capable of separating the transfer substrate 10 from the coated web 11,12 (Figure 1; column 5, lines 18-21). The apparatus of Francis, Jr. is illustrated below:



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Although Francis, Jr. discloses the heater and separating means, he does not specifically disclose, as per applicant claim 1, that the apparatus includes a heater capable of preheating the substrate web 12.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the apparatus of Francis, Jr. with a heater capable of preheating the substrate web 12 either alone or in contact with the transfer substrate 10,11 prior to passing the substrate web 12 and transfer substrate 10,11 to the hot press means 14,15 motivated by the fact that Nelson, also drawn to transfer laminating apparatus, discloses that although transfer lamination can proceed without a standalone preheating means (Figure 4), it is also known to provide a separate heater means 73 or 74 to either preheat the entire laminate 10,20 or simply the receiving substrate 20 prior to passing the webs to a hot-press means 71,72 (Figures 5 and 6; column 4, lines 56-64). He further teaches that preheating is highly advantageous in increasing the rate of travel of the webs through the apparatus since it is not necessary to maintain as great a dwell time in the hot press portions of the apparatus in order to achieved the desired transfer temperatures (column 4, lines 64-68; column 5, lines 1-3). The apparatus of Nelson is illustrated below:



Although neither Francis, Jr. nor Nelson specifically disclose that the heater and hot press machines are integrated, as per applicant claim 5, it would have been obvious to one of ordinary skill in the art at the time of invention to incorporate a preheating heater means into the hot press

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means of Francis, Jr. or Nelson motivated by the fact that the skilled artisan would have appreciated that an integrated means would increase the apparatus efficiency by decreasing the web path distance between preheating and hot pressing thus avoiding heat loss in between the preheater and hot presser.

As per applicant claims 2 and 4, the apparatus of Francis, Jr. includes a cooling machine (cooling chamber) 18 capable of cooling the laminate comprising the web 12 in contact with the backing sheets 10 having the transferable coating thereon 11 (Figure 1; column 5, lines 14-18).

As per applicant claim 6, the apparatus of Francis, Jr. is capable of producing a substrate web 12 having a transferred coating 11 applied to both sides through the use of a second transfer substrate 10,11.

(2)

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (1), above, in further view of "Pressure-Sensitive Adhesives for Tapes and Labels" by Temin.

Francis, Jr., as set forth in section (1), above, discloses an apparatus comprising a heater, hot press, separating machine and cooling machine. Although he discloses, as illustrated above, that the separating machine (stripping rolls) 20 separate the backing sheets 10 from the web 12 with coating layers 11 thereon at an angle of approximately 90°, he does not specifically disclose, as per applicant claim 3, that the stripping angle is substantially 180°.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the stripping angle disclosed by Francis, Jr. et al. motivated by the fact that Temin discloses that angle of peel is intimately related to the force of pulling, the rate of pulling, the roughness and the surface energy of the surface, the pressure with which the films are pressed, the time of dwell before peeling is started and the mode of cohesive failure (page 657, 1<sup>st</sup> full paragraph).

(3)

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-064574 to Kazuhiko in view of U.S. Patent No. 4,724,026 to Nelson.

Regarding applicant claim 7, Kazuhiko discloses a method for manufacturing a n electrolyte (solid polymer film) 10A having a catalyst 9 applied to at least one side thereof comprising the steps of:

- (1) Contacting a catalyst carrier surface of at least one catalyst carrier substrate 6, carrying a catalyst 9 on one side thereof;
- (2) Forming a laminate by heating and pressing the catalyst carrier 6 and the solid polymer film 10; and
- (3) Separating the catalyst carrier substrate 6 from the solid polymer film 10 having the catalyst 9 transfer laminated thereto (Figure 3; abstract; paragraphs [0010] to [0014]).

Although Kazuhiko discloses the steps of contacting, hot pressing and separating, he does not specifically disclose the step of preheating the solid polymer film 10.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to provide the method of Kazuhiko with the step of preheating the solid polymer film 10 prior to hot pressing the solid polymer film 10 and transfer substrate 6,9 motivated by the fact that Nelson, also drawn to a transfer laminating method, discloses that although transfer lamination can proceed without a preheating step (Figure 4), it is also known to provide a preheating step, via heater means 73 or 74 to either preheat the receiving substrate 20 prior to transfer lamination via a hot-pressing means 71,72 (Figures 5 and 6; column 4, lines 56-64). He further teaches that preheating is highly advantageous in increasing the rate of travel of the webs through the apparatus since it is not necessary to maintain as great a dwell time in the hot press portions of the apparatus in order to achieved the desired transfer temperatures (column 4, lines 64-68; column 5, lines 1-3).

(4)

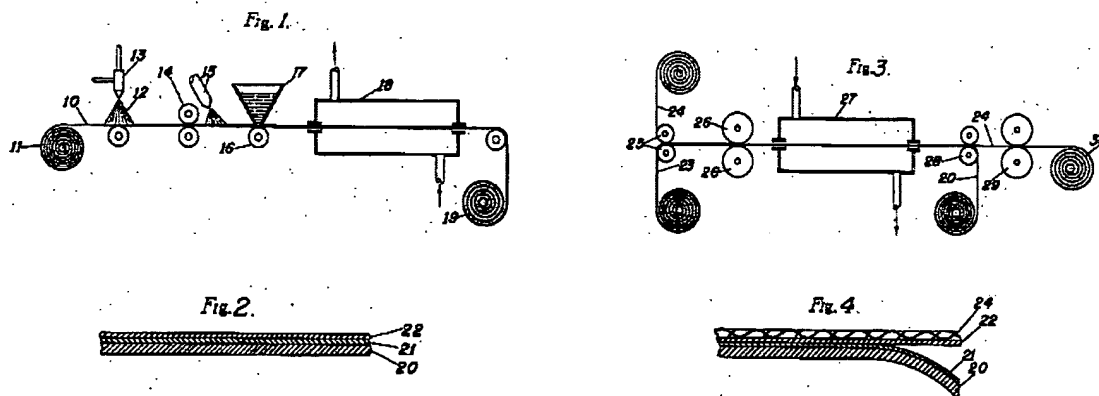
Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (3), above, in further view of U.S. Patent No. 2,556,078 to Francis, Jr.

Kazuhiko and Nelson, as combined in section (3), above, disclose a method of manufacturing a solid polymer film with a catalyst deposited on at least one surface which includes the steps of preheating the solid polymer film, contacting, hot pressing and separating,

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Although they do not specifically disclose, as per applicant claim 8, that the catalyst transfer sheet 6,9 is cooled prior to contact with the solid polymer film 10, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the coating on the transfer sheets prior to contact with the polymer film, such as by cooling, motivated by the fact that Francis, Jr., also drawn to methods for the transfer of a coating 22 from a transfer sheet 20,21 to a web substrate 24, discloses that during the manufacture of the transfer sheet 20,21,22, the transfer sheet is cooled prior to use in order to solidify the coating 22 applied to the transfer sheet backing 20,21 (Figures 1-4; column 8, lines 4-16; column 8, lines 59-75; column 9, lines 1-21).

Furthermore, although neither Kazuhiko nor Nelson specifically disclose the step of cooling the laminate after hot pressing and before separating, it would have also been obvious to one of ordinary skill in the art at the time of invention to do so motivated by the fact that Francis, Jr. also discloses that cooling the hot pressed laminate 20,21,22,24 via a cooling means 27 prior to separating via a separating means 28 drops the temperature of the laminate and enables the backing sheet 20,21 to be cleanly stripped from the transfer laminated film 22 (column 8, lines 59-75; column 9, lines 1-9). The method of Francis, Jr. is illustrated below:



(5)

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (3), above, in further view of "Pressure-Sensitive Adhesives for Tapes and Labels" by Temin.

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The references as combined in section (3), above, disclose a method for the formation of a polymer film with a catalyst deposited thereon. Although Kazuhiko discloses that the backing sheets are separated from the substrate with coating layers thereon at an angle of approximately 90° (Kazuhiko at Figures 3 and 4), they do not specifically disclose, as per applicant claim 9, that the stripping angle is substantially 180°.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the stripping angle disclosed by the references as combined in section (3), above, motivated by the fact that Temin discloses that angle of peel is intimately related to the force of pulling, the rate of pulling, the roughness and the surface energy of the surface, the pressure with which the films are pressed, the time of dwell before peeling is started and the mode of cohesive failure (page 657, 1<sup>st</sup> full paragraph).

(6)

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7 and 10 recites the limitation "the transfer substrate" in lines 8 and 3, respectively. There is insufficient antecedent basis for this limitation in the claim.

(7)

***Response to Arguments***

Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new ground(s) of rejection.

(8)

References B-H of Form PTO-892 have been cited by the examiner as having particular relevance to the subject matter at hand.



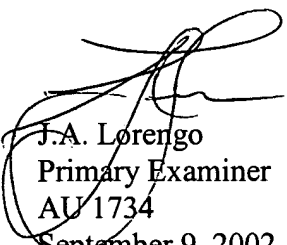
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(9)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (703) 306-9172. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7115 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



J.A. Lorengo  
Primary Examiner  
AU 1734  
September 9, 2002